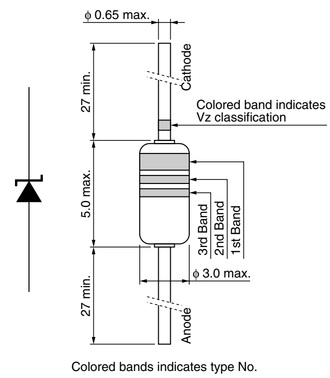
MAZ7000 Series

Silicon planar type

For stabilization of power supply

■ Features

- Large power dissipation P_{tot} (800 mW)
- Allowing to supply with the radial taping



Cathode on the first band (wide)
1 : Cathode
2 : Anode
JEDEC : DO-41

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Repetitive peak forward current	I_{FRM}	200	mA
Total power dissipation*1	P_{tot}	800	W
Non-repetitive reverse surge power dissipation*2	P_{ZSM}	60	W
Junction temperature	T_j	200	°C
Storage temperature	T_{stg}	−55 to +200	°C

Note) *1 : P_{tot} = 800 mW achieved with a printed-circuit board
*2 : t = 100 µs, T_j = 150°C

• Color indication of V_Z rank classification

A rank	B rank
Blue	Red

■ Common Electrical Characteristics $T_a = 25°C$*1

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	V_F	I_F = 200 mA			1.0	V
Zener voltage*2	V_Z	I_Z .... Specified value	Refer to the list of the electrical characteristics within part numbers			V
Operating resistance	R_Z	I_Z .... Specified value				Ω
Reverse current	I_R	V_R .... Specified value				µA
Temperature coefficient of zener voltage*3	S_Z	I_Z .... Specified value				mV/°C
Terminal capacitance	C_t	V_R .... Specified value				pF

Note) 1. Rated input/output frequency: 5 MHz
2. *1 : The V_Z value is for the temperature of 25°C. In other cases, carry out the temperature compensation.
*2 : Guaranteed at 20 ms after power application.
*3 : T_j = 25°C to 150°C

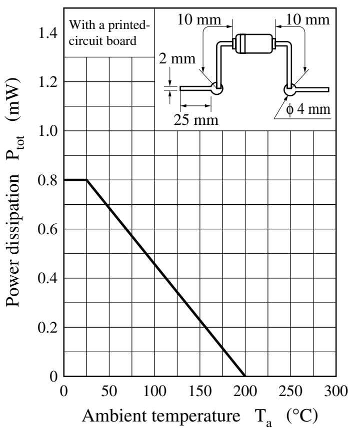
■ Electrical characteristics within part numbers $T_a = 25°C$

Part Number	Zener voltage V_Z Min (V)	Max (V)	I_Z (mA)	Reverse current I_R Max (μA)	V_R (V)	Operating resistance R_Z Max (Ω)	I_Z (mA)	Temperature coefficient of zener voltage S_Z Typ (mV/°C)	I_Z (mA)	Terminal capacitance C_t (pF) (V_R = 0 V) f = 1 MHz Typ	Marking Symbol (Color indication) 1st.	2nd.	3rd.
MAZ7051	4.8	5.4	40	20	1	10	40	0	40	200	Green	Brown	Brown
MAZ7051-A	4.8	5.15											
MAZ7051-B	5.05	5.4											
MAZ7056	5.2	6.0	40	20	2	8	40	1.5	40	180	Green	Blue	Blue
MAZ7056-A	5.3	5.7											
MAZ7056-B	5.6	6.0											
MAZ7062	5.8	6.6	40	20	3	6	40	2.4	40	330	Blue	Red	Red
MAZ7062-A	5.8	6.2											
MAZ7062-B	6.1	6.5											
MAZ7068	6.4	7.2	40	10	3	6	40	3.1	40	280	Blue	Gray	Gray
MAZ7068-A	6.4	6.8											
MAZ7068-B	6.7	7.1											
MAZ7075	7.0	7.9	40	10	3	5	40	3.8	40	250	Purple	Green	Green
MAZ7075-A	7.0	7.45											
MAZ7075-B	7.35	7.8											
MAZ7082	7.7	8.7	40	10	4	5	40	4.5	40	230	Gray	Red	Red
MAZ7082-A	7.7	8.2											
MAZ7082-B	8.1	8.6											
MAZ7091	8.5	9.6	40	10	5	6	40	5.4	40	220	White	Brown	Brown
MAZ7091-A	8.5	9.05											
MAZ7091-B	8.95	9.5											
MAZ7100	9.4	10.6	40	10	7	6	40	6.3	40	220	Brown	Black	—
MAZ7100-A	9.4	10.0											
MAZ7100-B	9.9	10.5											
MAZ7110	10.4	11.6	20	5	7	8	20	7.4	20	160	Brown	Brown	—
MAZ7110-A	10.4	11.05											
MAZ7110-B	10.85	11.5											
MAZ7120	11.4	12.7	20	5	8	8	20	8.4	20	160	Brown	Red	—
MAZ7120-A	11.4	12.1											
MAZ7120-B	11.9	12.6											
MAZ7130	12.4	14.1	20	5	9	10	20	9.4	20	155	Brown	Orange	—
MAZ7130-A	12.4	13.25											
MAZ7130-B	13.15	14.0											
MAZ7150	13.8	15.6	20	5	10	12	20	11.4	20	150	Brown	Green	—
MAZ7150-A	13.8	14.7											
MAZ7150-B	14.5	15.4											
MAZ7160	15.3	17.1	20	5	11	12	20	12.5	20	135	Brown	Blue	—
MAZ7160-A	15.3	16.3											
MAZ7160-B	16.1	17.1											
MAZ7180	16.8	19.1	20	5	12	15	20	14.5	20	110	Brown	Gray	—
MAZ7180-A	16.8	18.0											
MAZ7180-B	17.8	19.0											
MAZ7200	18.8	21.2	20	5	14	15	20	16.6	20	100	Red	Black	—
MAZ7200-A	18.8	20.0											
MAZ7200-B	19.8	21.0											

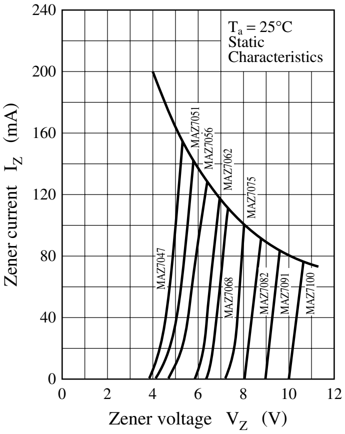
■ Electrical characteristics within part numbers (continued) $T_a = 25°C$

Part Number	Zener voltage V_Z			Reverse current I_R		Operating resistance R_Z		Temperature coefficient of zener voltage S_Z		Terminal capacitance C_t (pF) (V_R = 0 V) f = 1 MHz	Marking Symbol (Color indication)		
	Min (V)	Max (V)	I_Z (mA)	Max (µA)	V_R (V)	Max (Ω)	I_Z (mA)	Typ (mV/°C)	I_Z (mA)	Typ	1st.	2nd.	3rd.
MAZ7220	20.8	23.3											
MAZ7220-A	20.8	22.15	10	5	15	20	10	18.6	10	95	Red	Red	—
MAZ7220-B	21.85	23.2											
MAZ7240	22.8	25.6											
MAZ7240-A	22.8	24.35	10	5	16	20	10	20.7	10	90	Red	Yellow	—
MAZ7240-B	24.15	25.6											
MAZ7270	25.1	28.9											
MAZ7270-A	25.1	27.0	10	2	18	25	10	23.8	10	85	Red	Purple	—
MAZ7270-B	26.9	28.9											
MAZ7300	28.0	32.0											
MAZ7300-A	28.0	30.1	10	2	20	25	10	26.9	10	80	Orange	Black	—
MAZ7300-B	29.9	32.0											
MAZ7330	31.0	35.0											
MAZ7330-A	31.0	33.14	10	2	22	30	10	30.0	10	75	Orange	Orange	—
MAZ7330-B	32.86	35.0											
MAZ7360	34.0	38.0											
MAZ7360-A	34.0	36.16	10	2	24	30	10	33.4	10	70	Orange	Blue	—
MAZ7360-B	35.84	38.0											
MAZ7390	37.0	41.0	10	5	26	50	10	36.3	10	65	Orange	White	—
MAZ7430	40.0	46.0	10	5	29	50	10	41.1	10	60	Yellow	Orange	—
MAZ7470	44.0	50.0	10	5	31	50	10	44.9	10	55	Yellow	Purple	—
MAZ7510	48.0	54.0	10	5	33	50	10	48.6	10	50	Green	Brown	—
MAZ7560	52.0	60.0	10	5	35	50	10	54.9	10	45	Green	Blue	—

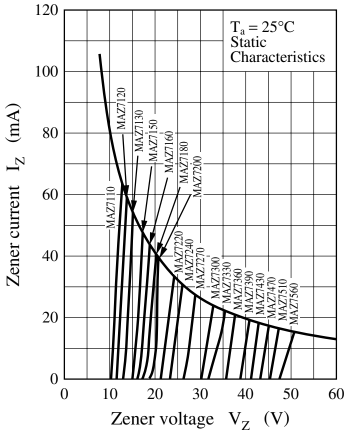
P_{tot} — T_a



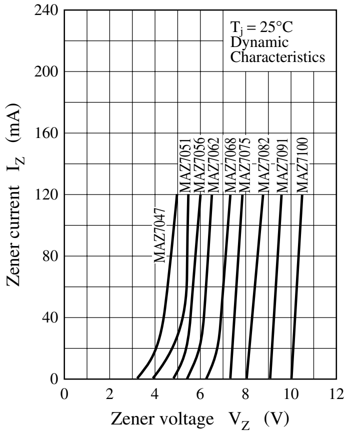
I_Z — V_Z



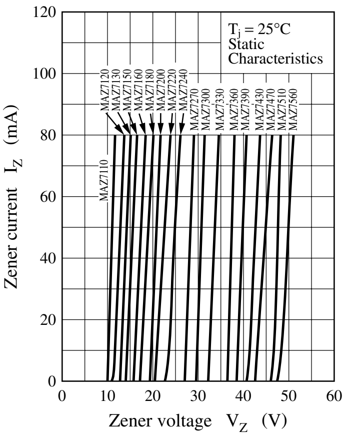
I_Z — V_Z



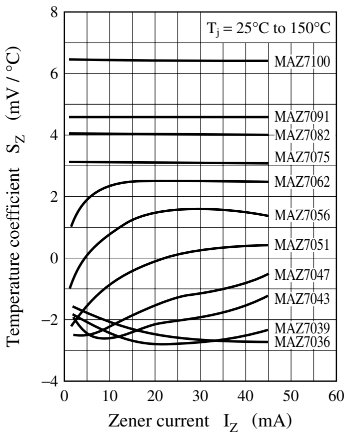
I_Z — V_Z



I_Z — V_Z



S_Z — I_Z



R_Z — I_Z

